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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/633,523	08/05/2003	Takeshi Okada	03500.015395.1	5405

5514 7590 09/19/2005

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EXAMINER
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OLSEN, ALLAN W

ART UNIT	PAPER NUMBER
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1763

DATE MAILED: 09/19/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No.	Applicant(s)	
	10/633,523	OKADA ET AL.	
	Examiner	Art Unit	
	Allan Olsen	1763	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 05 August 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-9 and 11 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-9 and 11 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 05 August 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. 09/867,492.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>8/5/03; 2/11/04; 6/21/04</u> . | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Claim Rejections - 35 USC § 102*

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1, 6 and 9 are rejected under 35 U.S.C. 102(a) as being anticipated by PCT publication WO00/37972 (hereinafter, Kiguchi). The following will cite column and line of US 6,630,274 as an English language equivalent of WO00/37972.

Regarding claim 1, Kiguchi teaches a method of forming an optical device wherein pixel demarcation is accomplished by forming resinous partition walls on a transparent substrate (column 5, lines 14-15). Kiguchi teaches that the substrate having partition walls thereon is dry etched with an oxygen plasma and then the substrate is subjected to a fluorine plasma treatment (column 12, lines 37-57). Kiguchi teaches using an ink jet to apply ink to the pixels (column 3, lines 16-20).

Regarding claim 6, Kiguchi teaches using one of CF<sub>4</sub>, SF<sub>6</sub> and NF<sub>3</sub> as the source of fluorine for the fluorine plasma treatment (column 12, lines 45-55).

Regarding claim 9, Kiguchi teaches providing a black matrix on a transparent substrate (column 11, lines 46-61).

Claims 1, 5-9 and 11 are rejected under 35 U.S.C. 102(e) as being anticipated by US Patent Application US 2004/0201048 of Seki et al. (hereinafter, Seki).

Regarding claim 1, Seki teaches a method of forming an optical device wherein pixel demarcation is accomplished by forming resinous partition walls on a transparent substrate (see: [0154]). Seki teaches that the substrate having partition walls thereon, is dry etched with an oxygen plasma and then the substrate is subjected to a fluorine plasma treatment (see: [0055]). Seki teaches using an ink jet to apply ink to the pixels (see, [0002]).

Regarding claim 5, Seki teaches achieving contact angles that coincide with applicant's claimed angles (see, [0050]).

Regarding claim 6, Seki teaches using one of CF<sub>4</sub>, SF<sub>6</sub> and CHF<sub>3</sub> as the source of fluorine for the fluorine plasma treatment (see, [0050]).

Regarding claim 7, Seki teaches using a mixture of O<sub>2</sub> and one of CF<sub>4</sub>, SF<sub>6</sub> and CHF<sub>3</sub> for the fluorine plasma treatment wherein the O<sub>2</sub> comprises 25 % of the gas mixture (see: figure 9 and [0178]).

Regarding claims 8 and 11, Seki teaches using ink comprising a colored resin and water and an organic solvent (see: abstract and [0145] - [0160]).

Regarding claim 9, Seki teaches providing a black matrix on a transparent substrate ([0154]).

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 2 and 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Seki.

Seki does not explicitly teach applicant's claimed results pertaining to the coarseness of the partition walls.

It would be obvious to one skilled in the art to carry out Seki's method according to the teachings of Seki. Because Seki and applicant use the same resinous material to form the partition walls and because Seki and applicant treat the resinous partition walls with the same plasma treatment, the skilled artisan is expected to achieve the same results that have been obtained by applicant.

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Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Seki in view of U.S. Patent 5,015,856 issued to Gold.

The teachings of Seki, as noted above, are herein relied upon. In addition it is noted that Seki teaches the partitioning members may be formed using a black pigment ([0154]).

Seki does not teach using carbon black in the resinous partitioning members.

Gold teaches a resinous black barrier pigmented with carbon black (column 5, lines 33-36).

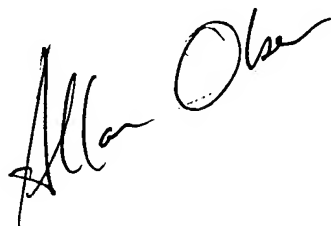
It would be obvious to one skilled in the art to use carbon black as the black pigment because Seki generically teaches using of a black pigment and Gold demonstrates carbon black is in the art as a black pigment that is used to form a resinous black barrier.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Allan Olsen whose telephone number is 571-272-1441. The examiner can normally be reached on M-F 1-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Parviz Hassanzadeh can be reached on 571-272-1435. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in black ink, appearing to read "Allan Olsen", written in a cursive style.

Allan Olsen  
Primary Examiner  
Art Unit 1763